

## **REMARKS**

### **I. INTRODUCTION**

Applicant has amended claims 1,5, 10, 13, 17 and 21 . Accordingly, claims 1-18 and 20-21 are presently pending in this application. Applicant respectfully requests further examination and reconsideration of the application in view of the foregoing amendments and the following arguments.

### **II. AMENDMENT TO THE DRAWINGS**

Applicant has submitted herewith as Exhibit B six sheets of formal drawings including one sheet of corrected drawings. In particular, in Figure 9, Applicant has added an engine and corresponding reference number 216 in accordance with the Examiner's request to further illustrate the invention. Entry of the formal and corrected drawings is respectfully requested.

### **III. AMENDMENT TO THE SPECIFICATION**

Applicant has amended paragraph 0038 of the application by adding the reference numeral 216 to corresponding to the amendment to the drawings. Applicants respectfully submits that the amendment does not add any new matter.

### **IV. AMENDMENT TO THE CLAIMS**

Claims 1 and 13 have been amended to clarify that the "side members" and "cross members" are integrated "so as to form a unitary member." Support for this amendment can be found throughout the specification and drawings including in the Figures and at page 2 paragraph 0005. Claims 5, 10, and 17 have been amended to clarify that the strut rod has a first end coupled to the vehicle subframe and a second end coupled to the

vehicle frame. Support for this amendment can also be found throughout the specification and drawings including in Figures 1-2 and at page 7, paragraph 0025.

Claim 21 has been amended to clarify the recitation of the invention in accordance with the Examiner's request.

**V. REJECTION OF CLAIMS 1-3, 5-8, 10, 13-15 AND 17-18 UNDER 35 U.S.C. § 102(B)**

Claims 1-3, 6-8, 13-15 and 18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kami et al. (U.S. Patent No. 5,560,651). Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Miura et al. (U.S. Patent No. 4,723,791).

Claims 1-3, 5-8, 10, 13-15 and 17-18 stand rejected as being anticipated by Kamei et al. (U.S. Patent No. 5,562,308). Applicant has amended claims 1, 5, 10, 13 and 17.

Applicant respectfully submits that the rejections of claims 1-3, 5-8, 10, 13-15, and 17-18 under 35 U.S.C. § 102(b) have been overcome and/or are improper because none of Kami et al, Miura et al. and Kamei et al. disclose or suggest all of the limitations recited in the claims as amended. In re Paulsen, 30 F.3d 1475, 1478-79, 31 U.S.P.Q.2d 1671 (Fed. Cir. 1994); Verdegaal Bros. v. Union Oil Co. of California, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1997) ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.").

Independent claims 1, 6 and 13 each recite "a subframe" including "first and second side members" and "first and second cross members, each of said first and second cross members integral with said first and second side members." Independent claims 1 and 13, as amended, further recite "...so as to form a unitary member." Applicants

respectfully submit that none of Kami et al., Miura et al. and Kamei et al. meet the recited limitations.

Words in a patent claim are accorded their ordinary and accustomed meaning. *Northern Telecom, Ltd. v. Samsung Electronics Co., Ltd.*, 215 F.3d 1281, 1291 (Fed. Cir. 2000). However, the words of the claims cannot be considered in isolation and the ordinary meaning of those words cannot be considered in a vacuum. *DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1324 (Fed. Cir. 2001). The ordinary meaning of a claim term, therefore, should be determined by reviewing the written description of the claimed invention. *Id.* The specification “acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.” *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The specification, therefore, “is always highly relevant to the claim construction analysis” and may be used to define terms within the claims. *Id.*

The Examiner has asserted that the term “integral” as used in the claims encompasses structures having members united by fasteners or welds. Office Action of July 11, 2002, p. 11. Applicants respectfully disagree. The claim language must be read in light of its use in the specification. Throughout the specification, Applicants are clear in using the word “integral” to refer to a one-piece or unitary member. For example, in the Summary of the Invention, Applicants state that “the first and second cross members are integral with the first and second side members such that the subframe is a unitary member”. Page 2, ¶ 0005; *see also* Page 7, ¶ 0027 (“Subframe 62 is unitary in constructions...”). Applicants further illustrate the contrast between the “integral” subframe as claimed and the prior art, stating “...because the members of the subframe

are integral with one another, there are no bolts, welds, or other fasteners required.” Page 2, ¶ 0006; *see also* page 10, ¶ 0032. Accordingly, the term “integral” as used in the claims has a defined meaning that is limited to a one-piece or unitary member. In further support of this construction, Applicant has amended claims 1 and 13 to clarify the recitation of the invention by adding the limitation “...so as to form a unitary member.”

Applicants respectfully submit that, as properly construed, none of Kami et al., Miura et al., and Kamei et al. disclose or suggest a subframe meeting the claimed limitations. Kami et al. discloses a subframe including side members 1, 1 and cross members 2, 3. Throughout the specification, however, Kami et al. teaches that the side members 1, 1, and cross members 2, 3 are “coupled” to other structural elements—and, notably, the side members and cross members are not even “coupled” directly to one another. As set forth in the specification, for example:

The front and rear ends of the side members 1, 1 are **coupled to outer sleeves 5 of four rubber bush mounts 4**, respectively, and left and right ends of the front cross members 2 extending laterally of the vehicle body are **coupled to the outer sleeves 5, 5 of the two front rubber bush mounts 4, 4**....Portions of the side members 1, 1, near their front ends, are coupled to portions of the front cross member 2, near its left and right ends, by trailing arm brackets 6<sub>1</sub>, 6<sub>1</sub>...

...

Left and right ends of the rear cross member 3, extending laterally of the vehicle body are **coupled to the outer sleeves 5, 5 of the two rear rubber bush mounts 4, 4**, Fig. 5, coupled to the rear ends of the side member 1, 1....

Column 5, lines 36-41, 44-53 (emphasis added). Nothing in Kami et al. indicates that the members of the subframe SF can be integral with one another. The term “integral” (or variations thereof) are found in Kami et al. in only one, completely different context—

integrating members such as a subframe, rear suspensions, and the exhaust system. See, e.g., Column 1, lines 15-24.

Miura et al. discloses a subframe having longitudinal members 40 and a pair of cross members 42, 44. As stated in Miura et al, however, members 42, 44 are welded to members 40. Col. 4, lines 46-50. Accordingly, the subframe of Miura et al. also does not anticipate the claimed invention.

Kamei et al. also discloses a subframe having longitudinal members 3 and a pair or cross members 1, 2. Kamei et al. does not explicitly indicate, however, how the members 1, 2, 3 are connected to one another. See Col. 3, lines 14-29. Referring to Figure 6, it appears that Kamei et al. uses welds to interconnect members 1, 2, 3 as indicated by the lines extending across members 1, 2, and 3 at various locations. In any event, Kamei et al. does not explicitly or inherently disclose an “integral” relationship between members 1, 2, 3 as recited in the claims.

Applicant further notes that Kami et al. and Kamei et al. fail to teach or suggest several other limitations found in the rejected claims. Independent claim 6 and dependent claim 18 each refer to a “steering linkage” as being received by or connected to the subframe. Notably, Kami et al. and Kamei et al. disclose subframes for use with rear suspensions and therefore do not even disclose a “steering linkage” must less one that is received by or connected to the subframe. The structure 17 identified as a “steering linkage” in Kami et al. is simply a knuckle used to support a rear wheel and plays no role in steering the vehicle. The structure 15 identified as the “idler arm of steering linkage” in Kamei et al. is simply another suspension control arm and again plays no role in steering the vehicle.

Kamei et al. has also been used to reject claims 2,7, and 14. Applicant respectfully submits, however, that this rejection is incorrect. Each of claims 2, 7, and 14 recite “wherein said first and second cross members are configured to receive said first and second lower suspension control arms.” The structure 12 in Kamei et al. identified by the Examiner as a lower suspension control arm is received by a bracket 5 separately welded to the longitudinal member 3 of the subframe at a point intermediate the cross members 1,2. Col. 3, lines 34-39 and 58-59. Accordingly, the cross members of the subframe do not receive the lower suspension control arms.

Kamei et al. has further been used to reject claims 5, 10 and 17. Each of claims 5, 10, and 17 have been amended to clarify that the “strut rod” is coupled at a first end to the subframe and at a second end to the vehicle frame. The structure 18 identified as a “strut rod” in Kamei et al extends between the subframe and the drive axle or differential housing. This difference is significant because the claimed strut rod and the structure 18 in Kamei et al. perform different functions. The claimed strut rod is provided to react suspension loads into the vehicle frame and prevents the subframe from tilting. The structure 18 in Kamei et al. reacts drive axle torque into the subframe.

Because Kami et al, Miura et al. and Kamei et al. fail to teach or suggest all of the limitations recited in independent claims 1, 6 and 13, as amended, Applicant respectfully submits that the rejections of claims 1, 6, and 13 under 35 U.S.C. § 102(b) are improper and/or have been overcome and requests that the rejections be withdrawn. Further, because each of claims 2-3, 5, 7-1, 10, 14-15 and 17-18 depend from one of the aforementioned independent claims, Applicant respectfully submits that the rejections of

claims 2-3, 5, 7-8, 10, 14-15, and 17-18 under 35 U.S.C. § 102(b) are also improper and/or have been overcome and requests that the rejection be withdrawn.

**VI. REJECTIONS OF CLAIMS 1-4, 6-9, 11-16, 18 AND 20-21 UNDER 35 U.S.C. § 103(A)**

Claims 1-3, 6-8, 13-15 and 18 stand rejected as being unpatentable over Kami et al. (U.S. Patent No. 5,560,651). Claims 1, 4, 13, 16 and 21 stand rejected as being unpatentable over Kamei et al. (U.S. Patent No. 5,609,366) in view of Miura et al. (U.S. Patent No. 4,723,791). Claims 6 and 9 stand rejected as being unpatentable over Kamei et al. (U.S. Patent No. 5,609,366) in view of Kamei et al. (U.S. Patent No. 5,562,308). Claims 1, 6, 11-13, 18 and 20-21 stand rejected as being unpatentable over Kanazawa et al. (U.S. Patent No. 4,817,986) in view of Miura et al. (U.S. Patent No. 4,723,791). Claims Applicants have amended claims 1, 13 and 21. Applicant respectfully submits that the rejections of claims 1-4, 6-9, 11-16, 18 and 20-21 under 35 U.S.C. § 103(a) are improper and/or have been overcome because none of the cited references or combinations of references teach or suggest all of the limitations recited in the claims.

“Patent examiners carry the responsibility of making sure that the standard of patentability enunciated by the Supreme Court and by the Congress is applied in each and every case.” MPEP § 2141 (emphasis in original).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations.

MPEP § 2143. Applicant submits that the none of the cited references or combinations of references teach or suggest all of the limitations recited in claims 1-4, 6-9, 11-16, 18 and 20-21.

As discussed hereinabove in Section V, the term “integral” as used in independent claims 1, 6, and 13 has been defined as encompassing a unitary member. Also as discussed in Section V, none of Kami et al., Miura et al. nor Kamei, et al. ('308 Patent) disclose or suggest a subframe wherein the longitudinal and cross members are “integral” with one another as that term is used in the application. Applicants further submit that neither Kamei et al ('366 Patent) nor Kanazawa disclose or suggest a subframe meeting the recited limitation.

Kamei et al. ('366 Patent) discloses a subframe having longitudinal members 2 and cross members 3, 4. Kanazawa also discloses a subframe having longitudinal members 32R, 32L and cross members 33, 34. Again, however, both Kamei et al and Kanazawa fails to disclose or suggest the connecting relationship between the subframe members. The lines and apertures in Figure 1 of each patent appear to indicate welds and/or fasteners may be used. In any even, neither references explicitly or inherently discloses an “integral” subframe as recited in the claimed invention.

The Examiner cites *Howard v. Detroit Store Works*, 150 U.S. 164 (1893) for the proposition that “forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art.” Office Action of July 11, 2002, p. 6. Applicants respectfully submit, however, that 35 U.S.C. § 103 requires consideration of the invention “as a whole.” See *Carl Schenck A.G. v. Nortron Corp.*, 713 F.2d 782 (Fed. Cir. 1983) (“In its argument that the invention here is but making



integral what had earlier been made in four bolted pieces, Nortron seeks to limit the focus of inquiry to a structural difference from the prior art and then to show that that difference *alone* would have been obvious. That effort is not proper under the statute, which requires that an invention be considered “as a whole,” 35 U.S.C. § 103.”). Embodiments of the claimed subframe provides numerous benefits including a reduction in assembly time, improved dimensional control of suspension and steering mounting points, an integrated front suspension subassembly and increased cab space through lower engine mounting. Application page 10, ¶ 0032. When considered “as a whole” the integral subframe claimed in the application is a nonobvious improvement over conventional subframes.

Applicant again notes that the cited references and combinations fail to teach or suggest several other limitations found in the rejected claims. For example, the rejection of claims 6 and 18 as unpatentable over Kami et al. is unsupported as discussed hereinabove in Section V. The rejection of claim 21 as unpatentable over Kamei et al. (‘366 Patent) in view of Miura et al. is also unsupported as neither reference discloses or suggests a front suspension. The rejection of claim 6 as unpatentable over Kamei et al. (‘366 Patent) in view of Kamei et al. (‘308 Patent) is also unsupported as the structure 15 identified as a steering linkage is a suspension control arm and has no impact on steering the vehicle. Finally, the rejection of claims 6, 11-12, 18 and 20 as unpatentable over Kanazawa et al. in view of Miura et al. is unsupported because there is no teaching or suggestion in either patent that any steering component is connected to the subframe. Kanazawa et al. discloses a steering gear and steering linkage, but does not disclose or suggest that these components are coupled to the subframe.

Because the cited references and combinations do not teach or suggest all of the limitations recited in claims 1-4, 6-9, 11-16, 18 and 20-21, Applicants submit that the rejections of claims 1-4, 6-9, 11-16, 18 and 20-21 under 35 U.S.C. § 103(a) are improper and/or have been overcome. Accordingly, Applicants request that the rejections be withdrawn.

## **VII. CONCLUSION**

For the above cited reasons, all of the claims presently pending in this application are believed to be allowable. If the Examiner has any further questions or concerns, the Examiner is invited to contact the Applicant's undersigned attorney.

Respectfully submitted,



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William F. Kolakowski III  
Registration No. 41908  
Customer No. 26,127  
DYKEMA GOSSETT PLLC  
39577 Woodward Ave., Ste. 300  
Bloomfield Hills, MI 48304  
(248) 203-0822  
Attorney for Applicant

## **AMENDED PARAGRAPHS WITH MARKINGS TO SHOW CHANGES MADE**

[0038] Referring now to Figure 9, a third embodiment of a subframe 212 in accordance with the present invention will be described. Subframe 212 is substantially similar to subframe 62. Subframe 212, however, includes a cross member 214 that is integral with the other components of subframe 212. As illustrated in Figure 9, member 214 is provided to support the vehicle engine 216 and may take the place of cross member 34 of frame 20 shown in Figures 1-2. Member 214 extends generally transverse to axis 28. It should be understood that the size, shape, and configuration of member 214 may vary depending upon design requirements associated with the vehicle engine and frame 20.

## AMENDED CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

1. (Once amended) A subframe for a motor vehicle,  
comprising:

first and second side members

first and second cross members, each of said first and  
second cross members integral with said first and second side  
members so as to form a unitary member

wherein said first and second side members and said first  
and second cross members are configured to receive first and  
second lower suspension control arms and first and second upper  
suspension control arms.

5. (Once Amended) The subframe of claim 1 wherein said  
first cross member is configured to receive a first end of a  
strut rod having a second end coupled to a frame of said motor  
vehicle.

10. (Once Amended) The subframe of claim 6 wherein said  
first cross member is configured to receive a first end of a  
strut rod having a second end coupled to a frame of said motor  
vehicle.

13. (Once Amended) A vehicle subassembly, comprising:  
a subframe having  
first and second side members; and,  
first and second cross members, each of said first and  
second cross members integral with said first and second side  
members so as to form a unitary member  
first and second lower suspension control arms coupled to  
said subframe; and,  
first and second upper suspension control arms coupled to  
said subframe.